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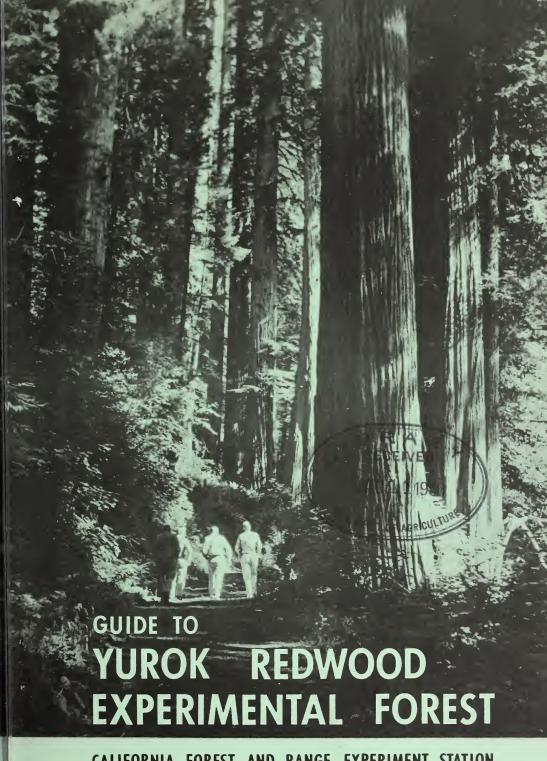


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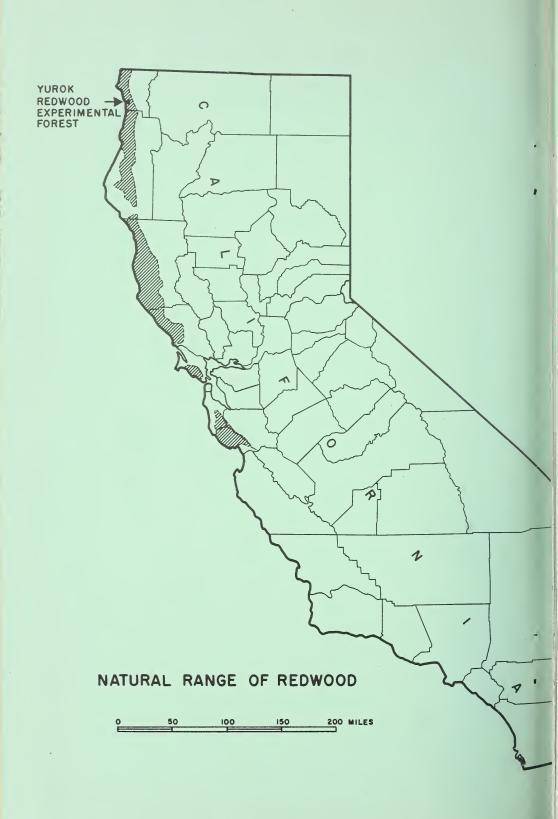


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CALIFORNIA FOREST AND RANGE EXPERIMENT STATION FOREST SERVICE - U. S. DEPARTMENT OF AGRICULTURE

in cooperation with SIMPSON REDWOOD COMPANY



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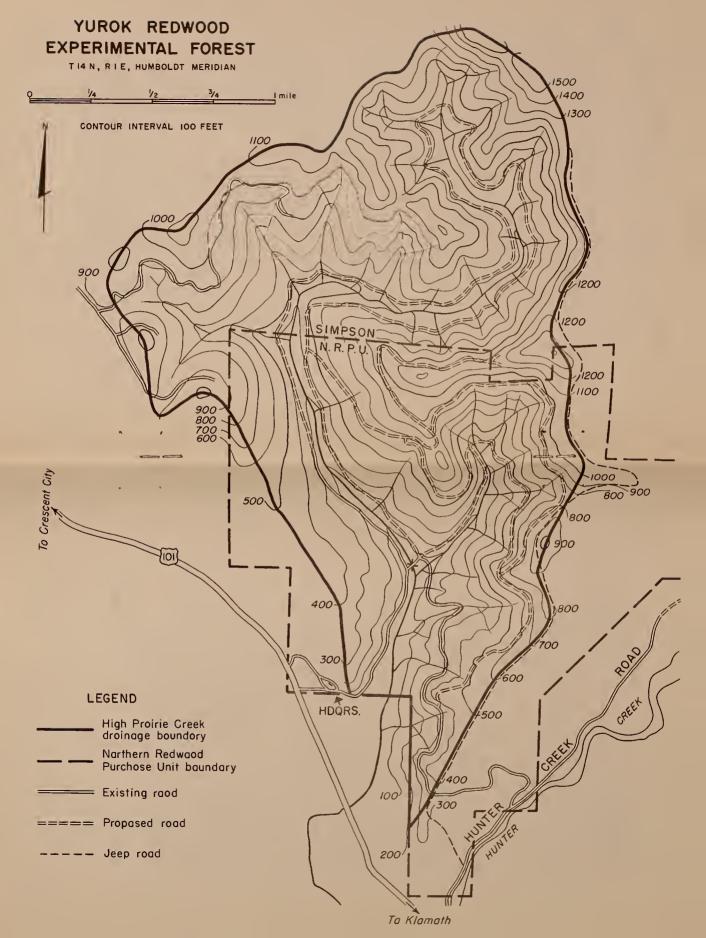
GUIDE TO THE YUROK REDWOOD EXPERIMENTAL FOREST

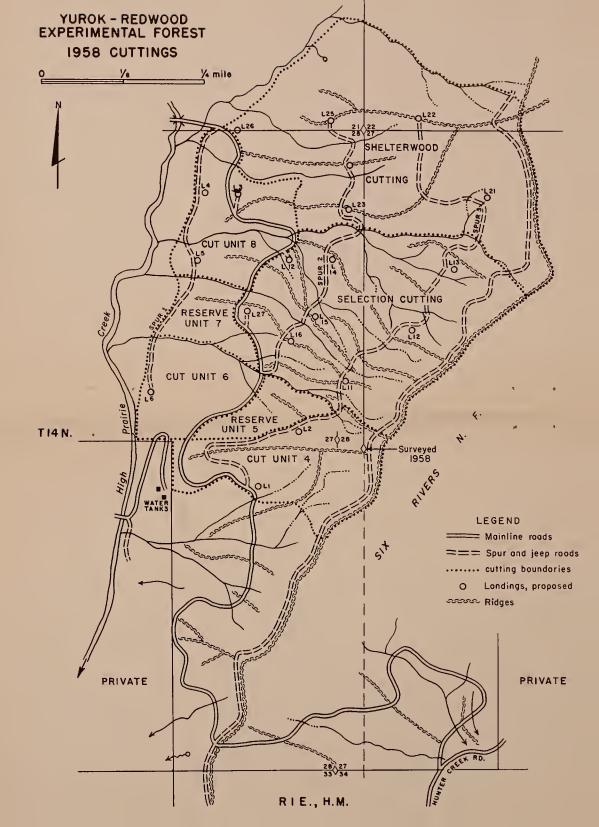
By D. F. Roy and Kenneth N. Boe

FOREST RESEARCH AT THE YUROK REDWOOD EXPERIMENTAL FOREST is a cooperative venture between the Simpson Redwood Company and the California Forest and Range Experiment Station. The purpose is to conduct experiments and demonstrations which will benefit forest land owners of northwestern California by obtaining accurate information on methods of management, silviculture, logging techniques, utilization, and watershed management adapted to sustained yield forestry in the redwood and Douglas-fir types.

THE EXPERIMENTAL AREA consists of the forested part of the High Prairie Creek drainage above the Redwood Highway. The tract lies about 4 miles north of Klamath and 15 miles south of Crescent City, Del Norte County, California. The lower part of the drainage, approximately 935 acres, is federally owned. The upper parcel, about 1,170 acres, is owned by Simpson Redwood Company.

FOREST TYPES in the High Prairie Creek drainage include virgin redwood, redwood--Douglas-fir, and Douglas-fir. The area is particularly favorable for forest management research because it includes within a small area a wide variety of forest type and site conditions representative of the northern redwood region. Sites vary from pure redwood approaching the best found anywhere in the redwood region, to medium quality Douglas-fir. At least half the area supports good quality redwood stands which include varying amounts of Douglas-fir, and, sometimes, western hemlock, Sitka spruce, and Port-Orford-cedar. Bigleaf maple, red alder, and other hardwood species are sometimes a stand component along the streams. remaining forest varies from fair quality redwood--Douglas-fir to medium site, open Douglas-fir stands. About 20 percent of the area burned between 1935 and 1940 but damage was limited mainly to the understory and to pole stands.





THE CLIMATE at Yurok is mild and humid. In 10 years since 1947 annual rainfall at Klamath has averaged over 89 inches. Fog occurs frequently during the relatively dry period between June and September. Between October and May the monthly precipitation averages more than 5 inches, the highest rainfall coming from November through February. In a period of 14 years the greatest rainfall recorded for a single day was 9.82 inches. The longest period without rain was 26 days.

Monthly average temperatures range from 45° F. in January to 59° F. in August. The extreme temperatures recorded are 24° F. in January and 90° F. in October. Freezing temperatures occur between November and May, although the minimums in April and May have not dropped below 31° F.

TOPOGRAPHY AND SOIL conditions are typical of the northern part of the redwood region. Elevations range from 100 to 1,400 feet. Slope gradients, although predominantly moderately steep, vary from level to gentle on the flats along main streams and moderate on benches, to extremely steep on limited areas. The major slopes are deeply dissected by many short lateral drainages.

Most of the soil in the High Prairie Creek drainage, particularly that under the best redwood stands, has been classified as Melbourne clay loam. This soil generally is over 5 feet deep. Its acidity varies from slightly to strongly acid. The parent material is mostly sandstone, but occasionally shale. The Melbourne soils on the steeper slopes become more gravelly and often grade into shallow Hugo gravelly loam on the higher slopes and ridges.

OLD-GROWTH REDWOOD EXPERIMENTS now underway will show which reproduction method--clear cutting in patches, shelterwood, or selection--most effectively converts old-growth redwood into younger managed stands. The results from these studies are expected to furnish timely guides for managing the estimated 20- to 30-year supply of old-growth timber still remaining in the redwood region.

Some of the questions to be investigated are:

- . . . How do different reproduction cutting methods and post-logging treatments affect natural regeneration of redwood?
- . . . How does the growth of reserve trees in shelterwood cuttings compare to growth of those left after selection cutting?

 And can the future growth of individual trees be predicted accurately?
- . . . How do utilization problems differ for selection, shelterwood, and patch clear cutting?
- . . . Can shelterwood and selection cutting areas be relogged without too much damage to reproduction and reserve trees?
- . . . Can soil movement and streamside disturbance be reduced to a minimum by careful road engineering and post-logging treatment of skidroads?
- . . . Can the dangerous fire hazard of slash concentrations be eliminated without excess damage to reserve trees?





